

University of Huddersfield Repository

Fernando, G. and Amaratunga, Dilanthi

The impact of training and development on career advancement of professional women in the UK construction industry

Original Citation

Fernando, G. and Amaratunga, Dilanthi (2012) The impact of training and development on career advancement of professional women in the UK construction industry. In: CIOB World Construction Conference 2012, 28th-30th June 2012, Colombo, Sri Lanka. (Unpublished)

This version is available at http://eprints.hud.ac.uk/25341/

The University Repository is a digital collection of the research output of the University, available on Open Access. Copyright and Moral Rights for the items on this site are retained by the individual author and/or other copyright owners. Users may access full items free of charge; copies of full text items generally can be reproduced, displayed or performed and given to third parties in any format or medium for personal research or study, educational or not-for-profit purposes without prior permission or charge, provided:

- The authors, title and full bibliographic details is credited in any copy;
- A hyperlink and/or URL is included for the original metadata page; and
- The content is not changed in any way.

For more information, including our policy and submission procedure, please contact the Repository Team at: E.mailbox@hud.ac.uk.

http://eprints.hud.ac.uk/

THE IMPACT OF TRAINING AND DEVELOPMENT ON CAREER ADVANCEMENT OF PROFESSIONAL WOMEN IN THE UK CONSTRUCTION INDUSTRY

Nirodha Gayani Fernando* and Dilanthi Amaratunga Department of Building Economics, University of Moratuwa, Sri Lanka School of the Built Environment, The University of Salford, UK

Richard Haigh

School of the Built Environment, The University of Salford, UK

ABSTRACT

The redressing the gender imbalance in the UK construction industry has been emphasised on numerous occasions and many researchers have identified that women can contribute in an immense way towards the construction industry development. However, construction industry has failed to attract and retain women who are interested in a construction career. Participation of women is still very low in some parts of the industry, in particular, at a time when skilled people at all levels of the industry are in demand. Further, Training and Development (T&D) activities have been identified as one of the vital element for professional women's career advancement in the construction industry. However, most of the concepts related to competitive advantages of T&D on professional women's career advancement are imprecise and unstructured in the construction industry. There is little evidence of an accepted theoretical framework for applying the ideas and there is even less in the way of empirical evidence concerning the validity and utility of these concepts. This paper presents the how much/how little impact T&D has on women's career advancement. This paper is based on data collected from professional women in the UK construction industry.

Keywords: Career Advancement, Construction, Training and Development, Women

1. Introduction

The UK construction industry continues to suffer from a skill shortage, despite the global economic challenge. Skills within the construction industry are particularly vulnerable, as curtailments on training, apprenticeships and graduate recruitment in the past two years are likely to lead to a widening skills gap when the economy and the industry do inevitably rebound (CIOB, 2010). Therefore, skills gap is continued to present at the industry as demand for the skills can not cater the existing workforce. Hence, practitioners and researchers have suggested numerous ways to address the shortage of skilled workers (Menches and Abraham, 2007). Among the most promising solutions are higher wages, increased training opportunities, improvements in productivity, implementation of technology tools, innovative recruitment techniques, and an increased commitment to diversity (Menches and Abraham, 2007). Within the solution, an increase commitment to diversity is quite popular in the industry. According to ONS (Office of National Statistics) (2009) the proportion of women in employment has grown markedly over the past four decay. At the start of 1971, the employment rate for women was 56% compared with 70% in September 2008 (ONS, 2009). This increase compares with a proportionately decrease in the employment rate for men over the same period, with the male employment rate falling from 92% to 78% (ONS, 2009). The constant reliance on a limited recruitment base disadvantages the industry by disregarding half the population and the diversity of skills these people have to offer (Gurjao, 2006). Indeed, it is said that a major obstacle to the industry in recruiting the best people is the fact that half of the population is largely ignored and

*

^{*} Corresponding Author: E-mail-nirodhafernando@uom.lk

also attracting more women is indeed giving them an equal opportunity as well (Green, 2005). Therefore, it is assumed that the recruitment of a greater number of women will be a clear indicator of the intention to reduce the skills gap and labour shortage in the industry and to increase the operation of equal opportunities policies (Greed, 2006). Thus, a logical solution to increase the number of women in the industrial professions is attracting more women to the industry initially and then subsequently increasing their retention (Gilbert and Walker, 2001). Hence, both recruitment and retention are equally important to raise the participation rate of women in construction.

The construction industry has a lower female representation rate of all major industries and service sectors in the UK; fewer than 12% of the industry's workforce are women (ONS, 2009). Most of the empirical work conducted thus far relating to women and construction, has concentrated on attracting them to the industry. However, a limited amount of successful recruitment initiatives will have a sustainable effect on the number of women entering the industry, unless those already working within it can be seen to be successful and can therefore act as role models and mentors for prospective female entrants (Amaratunga et al., 2007). Considering the changes to the construction labour market and the advances that women have made in improving their representation, there is now a need to gain a detailed understanding of what the precise nature of the barriers are to women's careers that can lead to their under-achievement (Amaratunga et al., 2007, Dainty et al., 2000). By considering previous studies, it can be highlighted that the lack of Training and Development (T&D) opportunities for career advanacement is one of the barriers to women's retention in the industry (Fernando et al., 2010; Amaratunga et al., 2007; Feilden et al., 2001; Dainty et al., 2000; Sommerville et al., 1993). Women and employers believe there is a need for funded government/employer training programmes to ensure adequate training that fits in with childcare responsibilities particularly for the women returners after a career break (Turgoose et al., 2006). Consequently, women are increasingly concerned about receiving adequate training particularly for non-traditional jobs (Turgoose et al., 2006).

Accordingly, the justification of the study was due to two main reasons. Firstly, engagement in necessary training and development activities is one of the important aspects for professional women in the construction industry in order to advance their careers. Secondly, although there is much research undertaken on need of T&D for career advancement in general, there is a lack of research conducted on the identification of necessary T&D activities in different career advancement phases; such as idealism (early career), endurance (mid career) and reinventive (advanced career) phases. Therefore, this study is aimed at addressing the how much or the how little impact T&D has on women's career advancement in the UK construction industry.

2. WOMEN'S CAREER ADVANCEMENT PHASES

Much of the career advancement work has focused on men and discusses the effects of age and career stage on an individual's attitudes and performance. The assumption behind much of this work is that, if people move through patterns of adjustment in their lives, then identifying the patterns associated with various ages and stages may help in our understanding of individuals' attitudes and behaviours in organisations. The question remains as to whether these theories enhance our understanding of women's careers. Following a review of the literature on career advancement phases, Swanson (1992) suggested that the stage theories that had received the most attention were those of Super (1957) and Levinson *et al.* (1978). Super (1957) proposed the four stages in his model of career development as:

- 1. Exploration
- 2. Establishment
- 3. Maintenance
- 4. Decline

Employees in the exploration stage have shown to hold lower levels of personal commitment to the occupation. These employees are more focused on trying to find out, if they belong and where they believe they can succeed in the organisation. In the establishment stage, employees are more

concerned with salary increases, promotion, achieving success, and job security. In the maintenance stage, employees tend to be more concerned with maintaining present job status, position, and performance level. They express less interest in working harder to achieve additional rewards. Finally, in decline, individuals tend to psychologically separate themselves from their work, and performance declines.

Further, Levinson *et al.* (1978) proposed a series of age-related life stages which encompassed unique activities and adjustments. He discussed four life eras:

- 1. Childhood (0-20)
- 2. Early adulthood (20-24)
- 3. Middle adulthood (40-60)
- 4. Late adulthood (over 60)

Levinson (1978) believes women make career decisions based on unique experiences during each of the four eras.

In contrast to Levinson, Super posits that these stages are not determined by age but rather by an individual's circumstances and perceptions. Research comparing the career development models of Levinson et al. (1978) and Super (1957) found some support for both models. The Levinson model is more closely related to the individual's career decisions, while the Super model is more closely related to the individual's attitude to work (Orstein and Isabella, 1990). In an extension of this work, Orstein and Isabella (1990) compared the explanatory validity of the Super and Levinson models when applied to professional women. Their work suggested that shifting career attitudes are more a function of age. Women's experiences were closely aligned to how long they were in their career, thus lending greater support to the Levinson model. Further, O'Neil & Bilimoria (2005) discuss how women's careers develop over time, particularly with regard to the impact of career contexts (societal, organisational, and relational) and women's own changing images of their careers and career success. They proposed a three-phase, age-linked model for women's career development phases; these are: the idealistic achievement phase (phase 1), the pragmatic endurance phase (phase 2) and the re-inventive contribution phase (phase 3). This three-phase and age linked model is more appropriate for this study than Levinson's model because, though Levinson's model is categorised according to age, it is not built around career contexts such as societal, organisational, and relational aspects. Therefore, O'Neil & Bilimoria's (2005) three-phase and age linked model is used for this study to categorise the different stages of women's career development and to identify different career success factors in different career phases. These three-phases are further explained in the following section.

1. Career phase 1: idealistic achievement phase (Early career)

The driving force of phase 1, early career (ages 24-35), is idealistic achievement. Women in this phase will most likely to base their career choices on their desires for career satisfaction, achievement and success, and their desire to positively impact on others (O'Neil & Bilimoria, 2005). According to O'Neil & Bilimoria (2005) women in this phase are most likely to see themselves in charge of their careers and will doubtless be proactive in taking strategic steps to ensure their career progress (internal career locus). They are; achievement-oriented, motivated to succeed and see their careers as opportunities to make a difference and as paths to personal happiness and fulfilment.

2. Career phase 2: pragmatic endurance phase (Mid career)

As O'Neil & Bilimoria (2005) explained the driving force of phase 2, mid-career (ages 36-45), is pragmatic endurance. Women in this phase are pragmatic about their careers and are operating in production mode, doing what it takes to get it done. As O'Neil & Bilimoria (2005) discussed, their career patterns are reflective of both ordered and emergent tendencies. They have a high relational context and are managing multiple responsibilities both personally and professionally. They may have been in the world of work long enough to recognise that no matter how internally driven they were

(when they were in career phase 1), to a large degree their career development is now impacted by others; professionally by managers and colleagues, and personally by spouses, children, families and friends.

3. Career phase 3: re-inventive contribution phase (Advanced career)

The driving force of phase 3, advanced career (ages 46-60) is re-inventive contribution (O'Neil & Bilimoria, 2005). As O'Neil & Bilimoria (2005) discussed, the women in this phase are focused on contributing to their organisations, their families and their communities. They are most likely to attribute others, personally and professionally, as having had input in to the direction of their careers(external career locus) and are likely to reflect a stable, planned career path (ordered career pattern). The women in the re-inventive contribution phase have experienced their personal lives being subsumed by their professional lives at some point during their careers. The women have advanced further into their careers; have re-conceptualised and reclaimed their careers as opportunities to contribute and to be of service to others without losing sight of themselves in the process.

3. IMPORTANCE OF TRAINING AND DEVELOPMENT TO WOMEN'S CAREER ADVANCEMENT

Skills shortage studies have tended to reinforce the view that the construction industry faces a skills crisis and desperately needs to invest in training its workforce (Chan and Dainty, 2007). These range from the annual skills foresight reports (e.g. CITB, 2003 cited in Chan & Rachel, 2009) that predicts industrial growth and resourcing levels to studies that consistently illustrate an industry encountering recruitment problems of both blue-collar operatives (e.g. Agapiou, 2002) and white-collar professionals (e.g. Dainty and Edwards, 2003). Too few people are being trained to replace the ageing skilled workforce, and too few are acquiring the technical and managerial skills required to get full value from new techniques and technologies are also issues for the skills shortage.

Turgoose *et al.* (2006) also argue that training is important particularly for women who return after a career break, in order to develop self confidence and to become familiar with new work. Further, women are particularly concerned about receiving adequate training for new jobs. Women who currently work in non traditional skills sectors experience considerable benefits from training and working in the sector. However, long and irregular hours in male-dominated professions with early starts and late finishes remain a barrier to women with children or caring responsibilities (Dale *et al.*, 2005).

The Construction Industry Training Board (CITB) has also been involved in a range of projects that seek not just to bring young people into the sector, but also to identify and facilitate projects that can act as learning vehicles (Miller et al., 2004). The Women Building London campaign, Women in the Built Environment (WITBE), Oxford Women's Training Scheme, and Women and Manual Trades, can be identified as those vehicles in the construction industry that provide a guide to women entering into construction. However, these projects were mainly concerned with recruitment rather than the retention of women in the industry. The women returnees' strategy for the UK Resource centre (UKRC) for Women in SET (Science Engineering and Technology). UKRC can be identified as one of the initiatives which, provide better conditions for qualified women to return to SET careers. Provisions of advice, mentoring and networking, training and flexible work placements are provided by the women's strategy for the UKRC to return women the SET occupations. Construction skills (former known as CITB) has developed a three point plan to encourage more women into construction under its diversity strategy initiative. Through education, school children have been given the opportunity to sample the construction industry through class projects. Positive Image campaigning was aimed at attracting men and women into the industry by highlighting the positive aspects of a construction career. Finally, by continuing to support employers, there have been increased targets for apprenticeships and local regeneration projects have encouraged clients to seek out more women applicants for vacancies (Yuill, 2005).

Dainty *et al.* (2004) have identified that addressing skills needs in the long-term requires employers to buy-in to the training process. Conversely, they emphasised that employers felt the industry's funding and training infrastructure were overly rigid and do not meet the needs of the types of people entering the industry.

4. RESEARCH METHODS

The questionnaire survey was conducted to explore how much/how little the impact of T&D has had on women's career advancement in the UK construction industry. According to Antaki (1994), the questionnaire survey has clear advantages; they are easy to administer, they are consistent across subjects, and the attention is focused on topics that the researcher considers meaningful or important. The respondent therefore has little or no freedom to negotiate the meaning or relevance of the attribution with the researcher. Therefore, biasness is minimal in the questionnaire. In accordance with the above advantages of the questionnaire survey, the researcher conducted the online questionnaire survey. A sample of online questionnaire survey is shown in Figure 1.

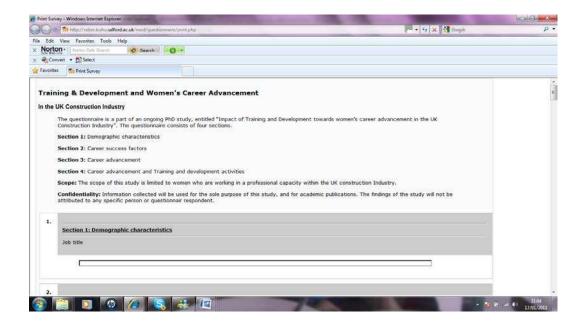


Figure 1 : sample of online questionnaire survey

The impact is identified based on how much/how little impact T&D has had on women's career advancement. Respondents were asked to identify the level of importance given to T&D activities in their career advancement. The T&D activities are shown in Table 1.

Table 1: Training and Development Activities

T&D activities	Description
Orientation programme	Programme to brief new employees on rules and regulations, policies, procedures and benefits
Career development programme	Classes and/or seminars to help employees develop a greater awareness of their talents, interests, values, career goals, to develop career decision-making skills, and learn about different career opportunities
Technical training	Programmes designed to teach specific job related information and skills
Management development	Programmes designed to teach broad managerial skills such as supervision and coaching, management decision making, strategic

T&D activities	Description
	policy making
Certification programme	Formal certification programme in which employees participate with company's financial support
Advanced management programme	Summer or year-long programme in management training and development typically conducted at a graduate or professional school
Coaching from peers in the organisation	Formal or informal process of day-to-day coaching and counselling by one or more of your peers on how to improve job performance and get along
Supervisory coaching	Formal or informal process of day-to-day coaching and counselling by supervisor on how to improve job performance and get along
Key project assignments	Formal or informal process of selection to carry out or assist in carrying out a specific project, typically involving work on a project team, task force, or ad hoc committee
Mentor	A relationship with a more experienced colleague in order to provide increased opportunities for advancement, corporate visibility, guidance and advice, and "running interference"
Sponsor	A relationship with an individual of higher status or greater impactin the organisation that provides "favoured status", special treatment, or increased power and influence
Networking	An informal set of contacts and channels of communication, inside or outside the organisation used to obtain information or advice relevant to job performance or personal and career goals
Career pathing	A process of promotion or transfer to a different job in the organisation to provide needed skills, experiences and exposure

The responses received from the questionnaire regarding the level of importance of such activities in their career advancement were analysed by using relative importance index.

Relative importance index =
$$\frac{\sum W}{A \times N}$$

Where W is the weighting given to each factor by the respondents, ranking from 1 to 7, A is the highest weight (i.e. 7 in the study) and N is the total number of samples. Based on the above equation, the relative importance index (RII) will be derived with a range from 0 to 1.

A likert scale was used to capture the opinions and behavioural variables; the opinion likert scale to represent seven scales of "importance", 1- unimportant and 7- extremely important. The online questionnaires were prepared and distributed among the respondents with web link, username and password. Duration of two weeks was given to the respondents to complete the questionnaire and at the end of the two weeks a reminder was sent with a one week extension. However, due to low response, the deadline for participants was further extended to three weeks. Table 2 shows the profile of the respondents who participated in the online questionnaire survey.

Table 2: Profile of the respondents participated in the online questionnaire survey

Participants	Number of questionnaire	Number of responses received			Response rate
	s sent	From idealism career phase	From endurance career phase	From reinventive career phase	
Professional women in the construction industry	175	32	31	30	53%

Having elaborated on the research methods used for data collection and analysis of this study, the next section attempts to present the research findings.

5. RESEARCH FINDINGS

The aim of this section is to identify the impact of training and development on women's career advancement. The impact is identified based on how much/how little impact T&D has had on women's career advancement. Respondents were asked to identify the level of importance given to T&D activities in their career advancement. Those activities are shown in Table 1.

5.1. HOW MUCH/HOW LITTLE IMPACT T&D HAS ON WOMEN'S CAREER ADVANCEMENT IN IDEALISM CAREER PHASE

Table 3 shows the relative importance of identified T&D activities in the idealism phase with RII values and contribution of each T&D on career advancement. In this career phase, networking and career development programmes have the highest contribution to career advancement at 9%. The least contributions to career advancement are sponsor, advanced management programmes and certification programmes at 6%. However, the difference between the highest and lowest contribution is merely 3%. The rest of the T&D activities i.e. technical training, management development, coaching from peers in the organisation, supervisory coaching, key project assignments and mentor contributed to career advancement was 8%, while orientation programme and career pathing was 7%. Hence, the contribution given to T&D activities on career advancement in the idealism phase is merely similar in weight. This is shown in Table 3.

Table 3 : Index of Relative Importance of T&D Activities and Percentage Contribution of T&D to Career Advancement in Idealism Career Phase

T&D activities	RII	Contribution of T&D's to career advancement (%)
Orientation programme	0.72	7.48
Career development programme	0.84	8.67
Technical training	0.79	8.20
Management development	0.78	8.10
Certification programme	0.59	6.05
Advanced management programme	0.63	6.48
Coaching from peers in the organisation	0.81	8.34
Supervisory coaching	0.78	8.05

Key project assignments	0.78	8.05
Mentor	0.78	8.10
Sponsor	0.61	6.34
Networking	0.86	8.91
Career pathing	0.70	7.20

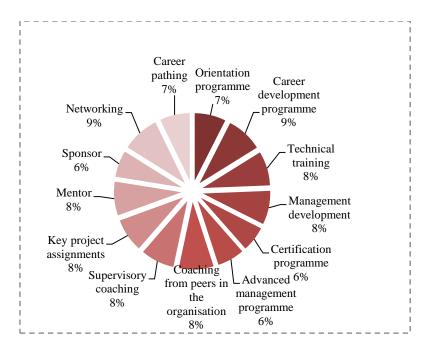


Figure 2: Contribution of T&D to Career Advancement of Women in Idealism Career Phase

5.2. HOW MUCH/HOW LITTLE IMPACT T&D HAS ON WOMEN'S CAREER ADVANCEMENT IN ENDURANCE CAREER PHASE

Table 4 shows the relative importance of identified T&D activities in the endurance phase with the RII values and contribution of each T&D to career advancement. In this career phase, networking and coaching from peers have the highest contribution to career advancement at 10%. The least contribution to career advancement are career pathing, orientation programmes, certification programmes and advanced management programmes at 6%. However, the difference between the highest and lowest contribution is merely 4%. The remaining T&D activities of management development, supervisory coaching contributed to career advancement by 9%, while career development programmes, technical training, and sponsorship was 7%. Career development programmes, mentor and key project assignment was 8%. Hence, the contribution of given T&D activities to career advancement in the endurance phase is merely similar in weight taken. This is shown in Figure 3.

Table 4 : Index of relative importance of T&D activities and percentage contribution of T&D to women's career advancement in endurance career phase

T&D activities	RII	Contribution of T&D's to career advancement (%)
Orientation programme	0.52	5.82
Career development programme	0.71	7.94

T&D activities	RII	Contribution of T&D's to career advancement (%)
Technical training	0.67	7.41
Management development	0.76	8.47
Certification programme	0.52	5.82
Advanced management programme	0.52	5.82
Coaching from peers in the organisation	0.86	9.52
Supervisory coaching	0.81	8.99
Key project assignments	0.76	8.47
Mentor	0.76	8.47
Sponsor	0.67	7.41
Networking	0.86	9.52
Career pathing	0.57	6.35

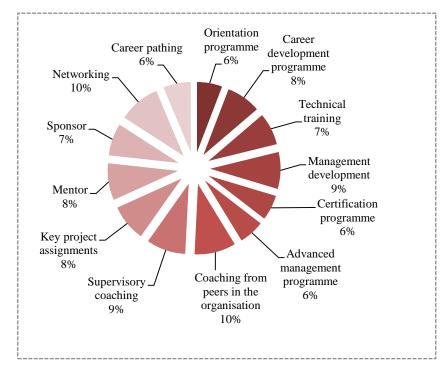


Figure 3: Contribution of T&D on career advancement women in endurance career phase

5.3. HOW MUCH/HOW LITTLE IMPACT T&D HAS ON WOMEN'S CAREER ADVANCEMENT IN REINVENTIVE CAREER PHASE

Table 5 shows the relative importance of identified T&D activities in the reinventive phase with the RII values and the contribution of each T&D on career advancement. In this career phase, networking has the highest contribution to career advancement at 13%. The least contribution to career advancement is advanced management programme at 2%. The difference between the highest and lowest contribution is 11%. The contribution of rest of the T&D activities are coaching from peers 11%, key project assignment and mentor 9%, career development programme, technical training and sponsor 8%, orientation programme 7%, career pathing 6% and certification programme 3%. This is shown in Figure 4.

Table 5 : Index of Relative Importance of T&D Activities and Percentage Contribution of T&D to Women's Career Advancement in Reinventive Career Phase

T&D activities	RII	Contribution of T&D's to career advancement (%)
Orientation programme	0.50	6.67
Career development programme	0.57	7.62
Technical training	0.57	7.62
Management development	0.64	8.57
Certification programme	0.21	2.86
Advanced management programme	0.14	1.90
Coaching from peers in the organisation	0.86	11.43
Supervisory coaching	0.64	8.57
Key project assignments	0.64	8.57
Mentor	0.71	9.52
Sponsor	0.57	7.62
Networking	1.00	13.33
Career pathing	0.43	5.71

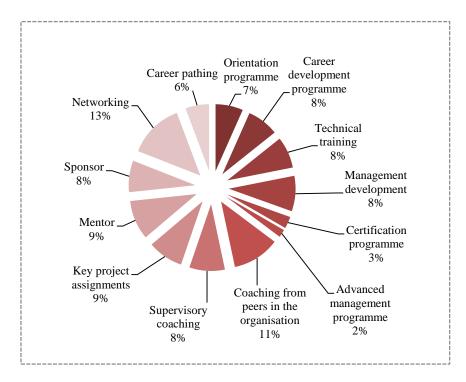


Figure 4: Contribution of T&D to Career Advancement Women in Reinventive Career Phase

6. DISCUSSION

Table 6 shows the findings of the impact of T&D activities on career advancement in idealism, endurance and reinventive career phases. The impact is identified as how much/how little influence T&D has on women's career advancement.

According to the Table 7, "networking" is dentified as the highly impacted T&D activity in each career phase. In the reinventive career phase 13% of the entire T&D have identified networking, whereas, 10% from endurance phase and 9% from idealism career phase agreed with networking. Therefore, networking is a strong element out of all T&D activities, which in turn helps career advancement. Kirchmeyer (1998) also argue that involvement in mentoring and receiving network support, and similar associations resulted in a positive outcome of higher salary and level of position. Further, this is strengthened by Warroll *et al.* (2010) where networking and job shadowing support outlined the potential benefit of this in enabling them to learn about new career growth opportunities and in gaining additional experience that can direct their long term career goals, expectations and behaviours.

Table 6: Impact of T&D Activities on Career Advancement in Each Career Phase

T&D activities	Impact of T&D on career advancement (%)			
	Idealism phase	Endurance phase	Reinventive phase	
Orientation programme	7	6	7	
Career development programme	9	8	8	
Technical training	8	7	8	
Management development	8	8	9	
Certification programme	6	6	3	
Advanced management programme	6	6	2	
Coaching from peers in the organisation	8	10	11	
Supervisory coaching	8	9	9	
Key project assignments	8	8	9	
Mentoring	8	8	10	
Sponsorship	6	7	8	
Networking	9	10	13	
Career pathing	7	6	6	

The next highest proportion from T&D activities is "coaching from peers" in the organisation, which is 11% in the reinventive phase, 10% in the endurance phase and 8% in the idealism phase. Coaching from peers is a very effective and easy way of learning new things and getting clarification for existing queries associated with work. For this activity the involvement of cost to the organisation is minimal. Therefore, organisation also encourages this way of learning and giving training to their employees. For some time, peer coaching has been actively used in a business environment for enhancing the performance of staff. The belief is that the ability to raise staff performance and seek long-term goals for them to gain towards, is important. In their efforts to improve the relevance of the professional development opportunities made available to their staff they are increasingly making use of coaching for creating the climate, environment and context that empowers individuals and teams to generate results. Coaching is a way of working with colleagues supportively in order to encourage them to develop personally and professionally, thus helping them to improve beyond their present capability.

Mentoring is also an important way of gaining training for their career advancement. Mentoring focusing on the individual can enhance morale, motivation and productivity and reduce staff turnover, as individuals feel valued and connected with both small and large organisational changes (The Coaching and Mentoring Network, 2010). This role may be provided by internal mentors and, increasingly, by external mentors. According to the above findings mentoring programmes generally prove to be popular amongst employees as it achieves a balance between fulfilling organisational

goals and objectives whilst taking into account the personal development needs of individual employees (The Coaching and Mentoring Network, 2010). It is a two-way relationship with both the organisation and the employee gaining significant benefits. The main reason for the popularity of mentoring among women in the organisation would be, that it is highly effective when used as a means of supporting training initiatives to ensure that key skills are transferred to the 'live' environment. Therefore, women in the idealism, endurance and reinventive phases have identified it as an important element among other T&D activities that provides a way of developing skills for their career advancement. Similarly, in endurance career phase networking and coaching from peers have also been identified and is the highest important T&D activities among all activities. Equally, women in the reinventive career phase consider the most important as networking and coaching from peers as the second most important T&D activity. However, in idealism career phase networking and career development programmes have been given the same and the highest ranking important among other T&D activities.

Career development programmes, technical training, management development programmes and supervisory coaching have been given a merely similar weighting among the three career phases. However, among each training activity are not similar. For instance, career development programmes and technical training do not have similar weighting.

7. CONCLUSIONS

Among 13 training activities such as: orientation programme, career development programme, technical training, management development, certification programme, advanced management programme, coaching from peers in the organisation, supervisory coaching, key project assignments, mentor, sponsor, networking and career pathing the contribution of each and every training activity for career advancement has been identified in each career phases. Accordingly, networking and career development programmes contributed the highest percentage among T&D activities at 9% in the idealism phase 10% in endurance and 13% in the reinventive phase. It was identified that impact of "networking" on women's career advancement has gradually increased with the career phase from idealism to reinventive phase. Further, this identified that when it comes to advance career phase such as endurance and reinventive career phases, need of "networking" for career advancement is higly important.

"Coaching from peers in the organisation" was identified as the second impacted T&D activity on women's career advancement among three career phases. Peer Coaching helps employees to become an integral part of their peers' success by helping them flawlessly execute their personal and professional development plans. This taps into the talents of employees so that they act in leadership roles to help each other while reducing the overhead for managers and supervisors to drive the plan execution.

8. References

Agapiou, A. (2002). Perceptions of gender roles and attitudes toward work among male and female operatives in the Scottish construction industry. *Construction Management and Economics*, 20, 697–705.

Amaratunga, R.D.G., Haigh, R.P., Shanmugam, M., Fernando, G. (nee Elvitigalage), Baldry, D. and Ruddock, L. (2007). *Proceedings of CIB World Building Conference: Construction for Development*. The role of women in construction industry development: the UK perspective. Cape Town.

Antaki, C. (1994). Explaining and Arguing: The Social Organisation of Accounts. London: Sage publisher.

Chan, P.W. and Dainty, A.R.J. (2007). Resolving the UK construction skills crisis: a critical perspective on the research and policy agenda. *Construction Management and Economics*, 25, 375–386.

CIOB. (2010). *A Report Exploring Skills In The UK Construction Industry*. Retrived from http://www.ciob.org.uk/sites/ciob.org.uk/files/CIO1402_Skills_Report_vAW3_LOWRES_0.pdf CIOB. (2010, December).

Dainty, A.R.J., Bagilhole, B.M. and Neale, R.H. (2000). A grounded theory of women's career under achievement in large UK construction companies. *Construction Management and Economics*, 18(2), 239-250.

Dainty, A.R.J., Bagilhole, B.M., Ansari, K.H. and Jackson, J. (2004). Creating equality in the construction industry: an agenda for change for women and ethnic minorities. *Journal of Construction Research*, 5(1), 75-86.

Fernando, G., Amaratunga, R.D.G. and Haigh, R.P., (2010). *Proceedings of CIB World Congress 2010: Building Better World.* Career advancement of the professional women in the UK construction industry: Career success factors. Salford Quays: The Lowry.

Fielden, S.L., Davidson, M.J., Gale, A.W. and Davey, C.L. (2001). Women, equality and construction. *Journal of Management Development*, 20(4), 293-304.

Gilbert, G.L. and Walker, D.H.T. (2001). Motivation of Australian white-collar construction employees: a gender issue?. *Engineering Construction and Architectural Management*, 8, 59-66.

Greed, C. (2006). Social exclusion: women in construction. In: Gale, A. W. and Davidson, M.J. eds. *Managing Diversity and Equality in Construction: Initiatives and Practice*, London: Taylor & Francis Group, 71-97.

Green, E. (2005). The recruitment and retention of women in construction: what lessons can construction industry learn from the medical profession with regards to the recruitment and retention of professional women? (B.Sc. Quantity surveying dissertation). University of Salford.

Gurjao, S. (2006). *Inclusivity: The Changing Role of Women in the Construction Workforce*. University of Reading: Chartered Institute of Building.

Levinson, D., Darrow, C.N., Klein, E.B., Levinson, M.H. and McKee, B. (1978). *The Seasons in a Man's Life*. New York, NY: Knopf.

Menches, C.L.P. and Abraham, D.M. (2007). Women in Construction-Tapping the Untapped Resource to Meet Future Demands. *Journal of Construction Engineering and Management*, 133(9), 701-707.

Miller, E.G. (2004). Frontier masculinity in the oil industry: the experience of women engineers. *Gender, Work & Organisation*, 11(1), 47-73.

O'Neil, D.A. and Bilimoria, D. (2005). Women's career development phases Idealism, endurance, and reinvention. *Career Development International*, 10(3), 168-189.

ONS (UK office for national statistics). (2009). *Women in the Labour Market Impact of downturn*. Retrived from http://www.statistics.gov.uk/cci/nugget.asp? id=2145 ONS. (2008, November).

Orstein, S. and Isabella, L. (1990). Age vs stage models of career attitudes of women: a partial replication and extension. *Journal of Vocational Behaviour*, 36, 1-19.

Sommerville, J., Kennedy, P. and Orr, L. (1993). Women in the UK Construction Industry. *Construction Management and Economics*, 11, 285-91.

Super, D. (1957). Psychology of careers. New York: Harper & Brothers.

Swanson, J.L. (1992). Vocational behaviour, 1989–1991: Life span career development and reciprocal interaction of work and nonwork. *Journal of Vocational Behaviour*, 41, 101-161.

Turgoose, C., Hall, L., Carter, A. and Stride C. (2006). *Encouraging an increase in the employment of women returners in areas of skill shortage in traditionally male industries*. London: The university of Sheffield.

Worrall, L., Harris, K., Stewart, R., Thomas, A. and McDermott, P. (2010). Barriers to women in the UK construction industry. *Engineering, Construction and Architectural Management*, 17(3), 268-281.

Yuill, L. (2005). *Changing the face of construction*. Retrived from http://www.pinsentmasons.com/media/175056650.htm Yuill, L (2009,December).